

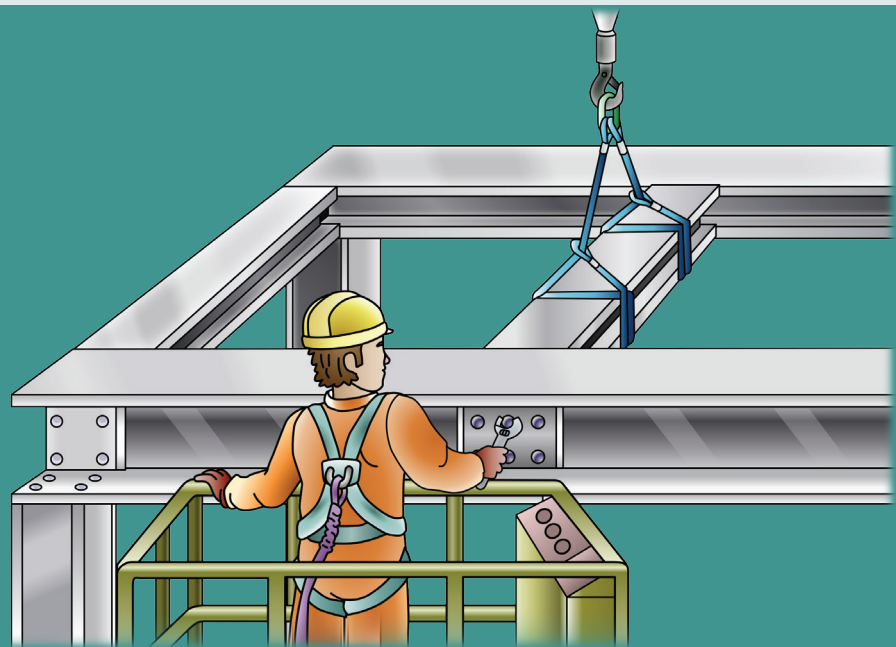
# RIGGING BASIC LEARNER WORKBOOK



## TRAINER'S MARKING GUIDE WITH MODEL ANSWERS

CPCCLRG3001

Licence to perform rigging basic level



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# Plan Task



**Trainers please note:**

**The answers in this book are in no way conclusive and are to be used as a guide only. Use your own knowledge and experience to correct the variation of answers that may be given by learners.**

Performance Criteria: 1.1

# Common tasks

Find out about your tasks. Check the site plans or talk to your supervisor or manager to find out what task you need to do. Talk to workmates involved in the task about how you will do the work, what equipment you need and what hazards may be involved.



## Theory Training Task 1

Performance Criteria: 1.1

(a) Name some rigging tasks you might do.

Answer may include:

- Dogging work such as slinging loads and directing plant and equipment
- Erecting steel structures
- Setting up and dismantling cranes or hoists
- Placing pre-cast concrete
- Setting up and dismantling safety nets and static lines
- Erecting mast climbers
- Installing cantilevered crane loading platforms
- Installing perimeter safety screens and shutters.



b) Name some things you might consider when planning the basic rigging task you are to perform.

Answer may include:

- Availability of equipment
- Task plans/drawings
- Hazards
- Location of task
- Weights
- Access (entry) and egress (exit) points
- Plant and equipment needed for task
- Other information required for the task.
- Site-specific issues
- Hazard control measures
- Specifics of task
- Permits





## Theory Training Task 2

*Performance Criteria: 1.1*

First, look at the picture and then plan your job. Your job is to get the crane operator to lift the load from the ground to the suspended floor.

Find out where the job is. To do this task you need to:

**Answer may include but is not limited to:**

- Plan the route
- Make sure the pathway is clear
- Check the load limit of the crane you will use
- Check with crane operator if you will use two-way radio, hand signals or whistles.



*Performance Criteria: 1.4*

## Identify workplace hazards

What is a hazard? A hazard is anything that can hurt you or others while you work. The government classes rigging as high risk. By law, only a licensed person can do rigging work. The licence includes knowing what workplace hazards to look for— and the causes.



## Theory Training Task 3

*Performance Criteria: 1.4*

Before starting any job on a worksite it is important you talk to appropriate people to find out about any site rules, procedures or policies that may affect the way you carry out your work. List three people you may need to check with about site hazards and issues related to working on a site.

1) **Answer may include:**

- 1) • Safety officers
- 2) • Colleagues
- Authorised managers
- 3) • Supervisors
- Site engineers.



Performance Criteria: 1.8

# Communication methods

When planning a job you need to think about how you and other workers such as the crane operator will communicate with each other. There are a number of ways that you can communicate directions or instructions to other workers.



## Theory Training Task 26

Performance Criteria: 1.8

List four (4) methods you could use to communicate with a crane operator or other site personnel.

1) Answer may include but is not be limited to:

- Hand signals
- Signage

2) • Whistles

- Horns and hooters
- Tool box meetings
- Hardwire speaker system

3) • Fixed frequency radio

- Electric bells in lift/hoists
- Written instructions

4) • Verbal communication



## Theory Training Task 27

Performance Criteria: 1.8

Which of the following communication methods **CANNOT** be used when the rigger and crane operator are out of sight of each other? Tick the correct answer.

- |  |                                    |
|--|------------------------------------|
| <input checked="" type="checkbox"/> Hand signals | <input type="checkbox"/> Whistles  |
| <input type="checkbox"/> Fixed frequency radios  | <input type="checkbox"/> Air horns |



# Practical Training Task 1

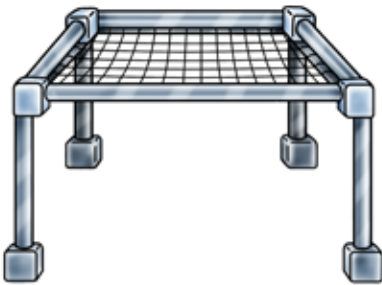
*Element 1—Plan Task*

*Performance criteria 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8*

## Plan Task

**Learners:** You **must** do this task under the **control of a licensed operator**.

Please wait for your trainer to advise you before trying the task.



First, your trainer will take you to an area where you will do a basic rigging task.

Second, your trainer will select a basic rigging task for you to plan—for example, install a safety net.

Third, your trainer will help you fill out a Safe work method statement (SWMS) for you to plan your basic rigging task.

When you fill out the SWMS make sure you:

- Assess the task. This means you need to plan the job.
- Identify workplace hazards. This means you look out for anything that can harm you or others while you work.
- Identify risk control and safety measures. This means you try to find the best way to control or prevent a hazard if you find a hazard in the workplace.
- Obtain site information. This means before you start a job you talk to people on-site and off-site about rules and plans you need to know about.
- Forces and loads in rigging work. This means before you start a job you need to think about the weights and types of loads you will use and the type of work you will do.
- Identify rigging equipment. This means you need to know how to use a wide range of rigging equipment to do the rigging work.
- Identify safety equipment. This means you need to know how to use safety equipment to stay safe while you are rigging, especially if you work at heights.
- Identify communication methods. This means that when you plan a job you need to think about how you and other workers such as the crane operator will communicate with each other.

Now fill out your SWMS (on next page). After you finish your SWMS, your trainer will check you have done all the planning you need to do. The licensed operator/trainer will then sign and date the box below.

**Element 1: Competent**

**Not yet competent**

Signature (licensed operator/trainer) ..... Date.....

# Select and Inspect Equipment



**Trainers please note:**

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*Performance Criteria: 2.3*

## Select and inspect rigging/safety equipment

When you start a job you need to select and inspect the rigging equipment that's right for the job.

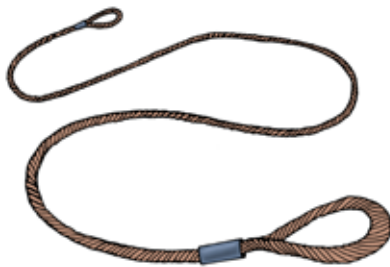


## Theory Training Task 28

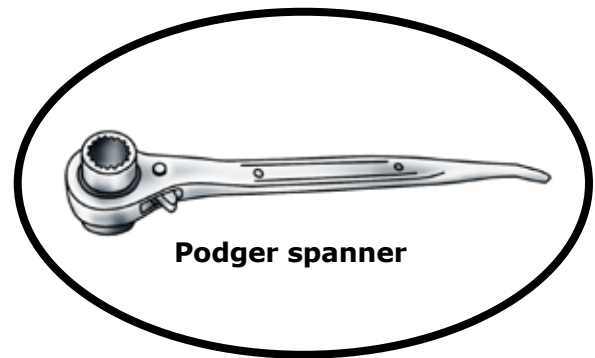
*Performance Criteria: 2.3*

Which of the following items of rigging equipment would you **not** need to use when installing a static line?

Circle the correct answer.



**FWR**



**Podger spanner**



**Turnbuckle**



**Rope grips**



## Theory Training Task 29

Performance Criteria: 2.3

There are several 'rule of thumb' formulas for working out the working load limit (WLL) of slings.

The formula for working out the WLL of FSWR (flexible steel wire rope) is:

$$\text{WLL (kgs)} = \text{Diameter}^2 \text{ (mm)} \times 8$$

- a) What is the WLL of a FSWR with a diameter of 25 mm? Show all calculations.

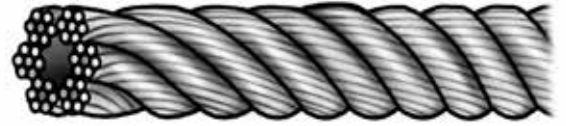
$$\text{WLL} = D^2 \times 8$$

$$\text{WLL} = 25^2 \times 8$$

$$\text{WLL} = 25 \times 25 \times 8$$

$$\text{WLL} = 625 \times 8$$

$$\text{WLL} = 5000 \text{ kg (5 tonnes)}$$



- b) The formula for working out the WLL of Grade T (80) chain is:

$$\text{WLL (kgs)} = \text{Diameter}^2 \text{ (mm)} \times 32$$

What is the WLL of a Grade T (80) chain with a diameter of 12 mm? Show all calculations.

$$\text{WLL} = D^2 \times 32$$

$$\text{WLL} = 12^2 \times 32$$

$$\text{WLL} = 12 \times 12 \times 32$$

$$\text{WLL} = 144 \times 32$$

$$\text{WLL} = 4608 \text{ kg (4.6 tonnes)}$$



- c) The formula for working out the WLL of fibre rope is:

$$\text{WLL (kgs)} = \text{Diameter}^2 \text{ (mm)}$$

What is the WLL of a fibre rope with a diameter of 35 mm? Show all calculations.

$$\text{WLL} = D^2$$

$$\text{WLL} = 35^2$$

$$\text{WLL} = 35 \times 35$$

$$\text{WLL} = 1225 \text{ kg (1.2 tonnes)}$$



# Set up Task



**Trainers please note:**

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*Performance Criteria: 3.2*

## Hazard prevention and control measures

Before you start any rigging work, you need to put in place ways to prevent and control hazards.



### Theory Training Task 40

*Performance Criteria: 3.2*

How would you control the following hazards?

a) People falling into trenches.

**Cover open trenches.**

b) Hazardous materials.

**Remove hazardous materials.**

c) Vehicles in the area.

**Move the vehicles or use traffic controls.**

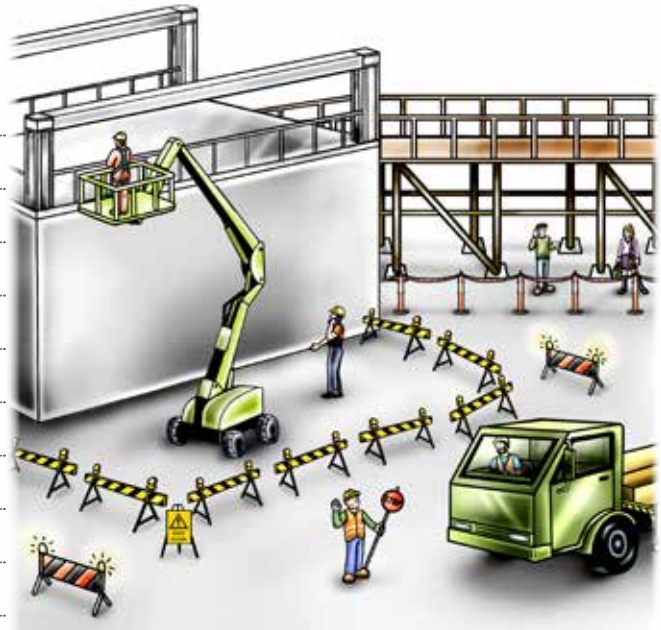




# Theory Training Task 41

Performance Criteria: 3.2

List the hazard control measures being used in this picture.



Answer may include but is not limited to:

- A hoarding, gantry or scaffolding
- Pedestrian exclusion zones
- Traffic control measures
- Warning signs and barriers
- Flashing hazard lights
- PPE
- Spotter



# Theory Training Task 42

Performance Criteria: 3.2

A job may require you to work closer to powerlines than the allowable safe working distance. List three (3) things you could do if you wanted to work closer than the allowable safe working distances in your state or territory.

1) Answer may include but is not limited to:

- Use a spotter
- Use electrical lockout equipment

2) • Contact the power supplier so they can isolate the power for you

- Use tiger tails if allowed (black and yellow warning devices that may have insulating ability).

3)

Performance Criteria: 3.3

## Check ground conditions

Check the ground is okay for any rigging equipment or cranes before you set up. Ground conditions affect the use of crane or elevating work platform outriggers and the need for packing. Mobile plant is less stable when it moves across rough, uneven or backfilled ground.



## Theory Training Task 43

Performance Criteria: 3.3

a) Should a crane be set up over underground services? Why yes/why no?

**No. The crane may sink or tip over while it is moving the load.**

b) What would you look for when checking a worksite for underground services?

- **Backfilled trenches**
- **Manhole covers**
- **Inspection covers**
- **Drains.**



## Theory Training Task 44

Performance Criteria: 3.3

Consider the ground-bearing pressure of the following soil types:

- Soft clay
- Dry sand

a) Which of the above soil types has the greater ground-bearing pressure?

**Dry clay**

b) Which type of soil has the greater ground-bearing pressure, shale or dry sand?

**Shale**

